ASHWIN R K

CONTACT

@ ashwin_m220590ph@nitc.ac.in

📱 9890722403

📍 321, Hostel C, NIT Calicut.

🌐 ashwin-r-k.github.io

PERSONAL DETAILS

Date of Birth	:	09/09/1998
Github	:	github.com/ashwin-r-k
Affiliation	:	Dep. Of Physics, NIT Calicut.

SKILLS

Python

C++

ACHIEVEMENTS & AWARDS

Won place.git competition at FossMeet23.

Won First Prize in research Poster Presentation on "Percolation Model for 2d Lattice" in undergraduate reserch seminar PROBE.

Certificate of Quantum Excellence at Qiskit Global Summer School on Quantum Machine Learning.

OBJECTIVE

I have a strong interest in Astrophysics and Computational Physics and My passion lies in learning new computational techniques and their applications in solving problems in physics and mathematics.

EDUCATION

National Institute of Technology, Calicut
2022
MASTER OF SCIENCE IN PHYSICS
7.76/10

St. Xavier's College, Mumbai
2016-2020
BACHELOR OF SCIENCE
2.53/4

New English High school.
2016
Highschool Specialized in Computer Science
65.08%

PUBLICATIONS

Estimation of Solar constant using irradiance
Xplore vol 9, Issue 1 (ISSN 2249-1878) (Sci.ed.) 2018.

LITERATURE REVIEW

Green's Function in Physics.

On the Hydrogen Atom Beyond the Born-Oppenheimer Approximation.

Birth, life, and death of black hole binaries around supermassive black holes.

Analysis on the Foucault pendulum by De Alembert Principle and Numerical Simulation.

A continuous-time persistent random walk model for flocking.

A High-Order Compensated Op-amp-less Bandgap Reference with 39 ppm/'C over -260~125'C Temperature Range and -50 dB PSRR.

Fine structure in the α decay of 218At.

On Maxwell's displacement current for energy and sensors.

PROJECTS

Finding Radian Velocity of Stars

We worked on fits data of the stars from the star catalog and then find the spectral lines. Calculting the stars velocity from doppler shift. We learned how to work with the Fits data set and used Matlab. Also, some of the dead ends we tried were using wolfram Mathematicas data and playing around with the classification of stars in the neighborhood.

Percolation Model for 2d Square Lattice.

Simulation of orbitals of hydrogen like atoms.

Simulation of Orbitals and Their Hybridization.

Analysis Formation of Hyperbola in Circular waves.

Analysis Of Line Profile for Em-Interference Estimation Of Solar constant Using Solar Irradiance In Mumbai, India.

IV Characteristics of Solar Cell.

Tuned mass damping - analysis using tracker.

Vertically Driven Inverted Pendulum.

X-ray Diffraction

And many more.

EXTRACURRICULAR

QPrep preparation for quantum computing and programming

Workshop on Quantum computing and programming [QWorld]

Attended Lecture "Unlocking the mysteries of the Universe with James Webb Space Telescope", by Manoj Puravankara TIFR, Mumbai.

PROGRAMING PROJECT

QM shooting method to obtain the lowest six energy levels for an infinite square well, energy levels for the potential for different n.

Schrodinger equation in 1D (Matching algorithms), Uncertainty products.

Home Automation iot.

SOCAL WORK

CONTENT WRITER at XRCVC

The primary goal of XRCVC is to assist people who are blind. As a content writer, I had the privilege to work towards the vision of inclusion of all. My responsibility was to create digital copies of books, including language books and college-level subject books, to make them accessible to everyone. I specifically worked on converting books meant for banking exam preparation, using my physics background to help with mathematics and software like MathType and LaTeX to write equations.

THANKS FOR TAKING TIME TO GETTING TO KNOW ME.

Please check my website (ashwin-r-k.github.io) for more details.